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10/658,311	09/09/2003	Andreas Herkersdorf	CH920020009US1	2148

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EXAMINER

SCOTT, RANDY A

ART UNIT	PAPER NUMBER
2109	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/658,311

Applicant(s)

HERKERSDORF ET AL.

Examiner

Randy Scott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/10/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Detailed Action

This Office Action is in response to the Application filed August 21, 2003.

Specification

1. The disclosure is objected to because of the following informalities:

On line 11 of pg. 15 of the applicant's specification; the term "Prefetching provides more advantageous for the parts" should be – Prefetching provides to be more advantageous for the parts -.

Appropriate correction is required.

Claim Objections

2. Claims 2-10, and 14-17 are objected to because of the following informalities:

On line 1 of claims 2-10, the term "A method of" should be –The method of-.

On lines 1-2 of claim 2, the term "determined be a prefix" should be – determined to be a prefix -

On line 2 of claim 2, the term "a prefix" should be – said prefix -.

On line 2 of claim 3, the term "a prefix thereof" should be –said prefix thereof-.

On line 2 of claim 4, the term "a prefix" should be – said prefix -.

On lines 5-6 of claim 4, the term "the corresponding routing destination" should be –a corresponding routing destination -.

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On line 2 of claim 5, the term “a prefix” should be – said prefix -.

On line 2 of claim 6, the term “the default routing destination” should be –a default routing destination -.

On line 1 of claim 8, the term “the event” should be –an event-.

On line 1 of claim 9, the term “the event” should be –an event-.

On line 2 of claim 9, the term “a covering path entry” should be –one of said covering path entries-.

On line 2 of claim 9, the term “a second lookup” should be –the second lookup-.

On line 3 of claim 9, the term “a prefix” should be – said prefix -.

On line 1 of claim 10, the term “the event” should be –an event-.

On line 2 of claim 10, the term “a prefix” should be – said prefix -.

On lines 3-4 of claim 10, the term “the corresponding routing destination” should be –a corresponding routing destination -.

On line 6 of claim 16, the term “a prefix” should be – said prefix -.

On line 4 of claim 17, the term “computer readable program code” should be –**said** computer readable program code -.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 12-13, and 17 are rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter

Regarding claims 12-13, the applicant is claiming a “computer usable medium” without any recitation or definition of a “computer usable medium” in the applicant’s specification. The applicants could be intending to claim a transmission medium and not a storage medium, which would cause the claim to fall under non statutory subject matter because a transmission medium is computer usable and could be a carrier wave or signal processing implementation, which doesn’t meet the statutory requirement of being a machine, process, article of manufacture, or composition of matter.

Regarding claim 17, the applicant also claims a “computer usable medium” without any recitation or definition of a “computer usable medium” in the applicant’s specification. The applicants could be intending to claim a transmission medium and not a storage medium, which would cause the claim to fall under non statutory subject matter because a transmission medium is computer usable and could be a carrier wave or signal processing implementation, which doesn’t meet the statutory requirement of being a machine, process, article of manufacture, or composition of matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless - -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 12, 14, and 16-17 are rejected under 35 USC 102 (b) as being anticipated by Hariguchi (Pat # 6,181,698).

With respect to claims 1, 12, 14, and 16-17, Hariguchi teaches a limitation for processing a data packet, having a destination address, towards a routing destination (see spec, sec. 6, lines 57-59, which teaches this limitation because data packets are routed having a destination address), and determining a default-route-prefix in a default-route determination step, when in a routing table cache and in a routing table, there is no entry with a destination address prefix that is a prefix of the destination address (see spec, sec. 7, lines 1-3, which teaches this limitation because there isn't an original prefix for the destination address and a prefix is provided for the determined packet destination address within the memory for producing associated table entry).

With respect to claim 2, Hariguchi et al teaches a limitation of the default-route-prefix being determined to be a prefix of at least the destination address (see spec, sec. 6, lines 63-67, and sec, 7 lines 1-2, which teaches this limitation because the address prefix is of the destination address).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless - -

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. Claims 11, 13, and 15 are rejected under 35 USC 102 (e) as being anticipated by Kumar et al (Pub # 2004/0028040).

With respect to claims 11, 13, and 15, Kumar et al teach a limitation for processing a data packet, having a destination address, towards a routing destination (see e.g. [0002], lines 2-5, which teaches this limitation because data packets are processed and transmitted to a destination address), a default-route-prefix residing together with a default routing destination as an entry in a routing table cache (see e.g. [0023], lines 1-3, which teaches this limitation because a destination address prefix is implemented for a destination address and may be cached as routing information, as shown in sec. [0027], lines 18-21), and forwarding the data packet to said default routing destination, when the default-route-prefix matches at least part of said destination address (see e.g. [0027], lines 19-21, which teaches this limitation because data packets that match address prefixes are forwarded to their destinations, also see sec. [0042], lines 6-8, which shows that default routing information may be determined for a destination address.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter

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sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

10. Claims 3 and 10 are rejected under 35 U.S.C. 103 as being unpatentable over Hariguchi (Pat # 6,181,698) in view of Kumar et al (Pub # 2004/0028040).

In reference to claims 3 and 10, Hariguchi teaches a method including the limitation of processing a data packet, having a destination address, towards a routing destination (see spec, sec. 6, as stated above).

Hariguchi explicitly teaches the limitations as disclosed above except for a first lookup step for the destination address, the destination address prefix being a prefix thereof is searched in the routing table cache and if said first lookup step results in not finding such destination address prefix, in a second lookup step for said destination address the destination address prefix being a prefix thereof is searched in the routing table, and a data packet being forwarded in a destination forwarding step to the corresponding routing destination in the event that the first lookup step results in finding the destination address prefix being a prefix of the destination address.

The general concept of a first lookup step for the destination address, the destination address prefix being a prefix thereof is searched in the routing table cache and if said first lookup

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step results in not finding such destination address prefix, in a second lookup step for said destination address the destination address prefix being a prefix thereof is searched in the routing table and a data packet being forwarded in a destination forwarding step to the corresponding routing destination in the event that the first lookup step results in finding the destination address prefix being a prefix of the destination address is well known within the art as illustrated by Kumar et al, which discloses a first lookup step for the destination address, the destination address prefix being a prefix thereof is searched in the routing table cache (see e.g. [0038], lines 9-12, which implies this limitation because the destination address prefix lookup, shown in sec. [0049], lines 1-3, is stored within the local cache containing routing information), if said first lookup step results in not finding such destination address prefix, in a second lookup step for said destination address the destination address prefix being a prefix thereof is searched in the routing table (see e.g. [0034], lines 9-12, which implies this limitation because multiple trie tables, associated with routing table entries, are also embedded for the lookup of address prefixes along with the local cache), and a data packet being forwarded in a destination forwarding step to the corresponding routing destination in the event that the first lookup step results in finding the destination address prefix being a prefix of the destination address (see e.g. [0034], lines 21-23, which implies this limitation because a forwarding engine is embodied within the invention to forward packets to their destination addresses based upon the destination address prefix, as shown in sec. [0032], lines 1-3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hariguchi et al to include the use of a first lookup step for the destination address, the destination address prefix being a prefix thereof is searched in the routing table

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cache, if said first lookup step results in not finding such destination address prefix, in a second lookup step for said destination address the destination address prefix being a prefix thereof is searched in the routing table, and a data packet being forwarded in a destination forwarding step to the corresponding routing destination in the event that the first lookup step results in finding the destination address prefix being a prefix of the destination address as taught by Kumar et al in order to maintain a contact center and effectively track routing information, as implied in sec. [0034], lines 12-15 of Kumar et al.

11. Claim 4 is rejected under 35 U.S.C. 103 as being unpatentable over Hariguchi (Pat # 6,181,698) in view of Kumar et al (Pub # 2004/0028040).

In reference to claim 4, Hariguchi teaches a method including the limitation of processing a data packet, having a destination address, towards a routing destination (see spec, sec. 6, as stated above).

Hariguchi explicitly teaches the limitations as disclosed above except for the second lookup step on the routing table resulting in finding the destination address prefix being a prefix of the destination address a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache in a cache update step and the data packet is forwarded in a destination forwarding step to the corresponding routing destination.

The general concept of for the second lookup step on the routing table resulting in finding the destination address prefix being a prefix of the destination address a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache in a cache update step and the data packet is forwarded in a destination forwarding step to the

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corresponding routing destination is well known within the art as illustrated by Kumar et al, which discloses a limitation of the second lookup step on the routing table resulting in finding the destination address prefix being a prefix of the destination address a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache in a cache update step (see e.g. [0027], lines 19-22, which implies this limitation because routing information may be cached that matches the address prefix), and the data packet is forwarded in a destination forwarding step to the corresponding routing destination (see e.g. [0002], lines 2-5, which implies this limitation because the information packets are transmitted to their destination addresses once the appropriate address is found).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hariguchi et al to include the use of the second lookup step on the routing table resulting in finding the destination address prefix being a prefix of the destination address a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache in a cache update step and the data packet is forwarded in a destination forwarding step to the corresponding routing destination as taught by Kumar et al in order to maintain a contact center and effectively track routing information, as implied in sec. [0034], lines 12-15 of Kumar et al.

12. Claim 5 is rejected under 35 U.S.C. 103 as being unpatentable over Hariguchi (Pat # 6,181,698) and Kumar et al (Pub # 2004/0028040) and in further view of Nagaraj (Pat # 6,947,415).

In reference to claim 5, Hariguchi and Kumar teach a method including the limitation of processing a data packet, having a destination address, towards a routing destination (see spec, sec. 6, of Hariguchi as stated above) and the second lookup step on the routing table resulting in finding the destination address prefix being a prefix of the destination address a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache in a cache update step (see e.g. [0027] of Kumar, as stated above).

Hariguchi and Kumar et al teach all the limitations disclosed except for the second lookup step resulting in not finding the destination address prefix being a prefix of the destination address, in a default forwarding step and the data packet is forwarded to a default routing destination.

The general concept of a default forwarding step wherein the data packet is forwarded to a default routing destination when a destination address prefix being a prefix of the destination address is not found is well known within the art as illustrated by Nagaraj, which discloses a limitation of a default forwarding step wherein the data packet is forwarded to a default routing destination when a destination address prefix being a prefix of the destination address is not found (see spec, sec. 6, lines 55-58, which implies this limitation because a default route destination is provided when an address prefix has no match within a routing table).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hariguchi and Kumar et al to include the use of the second lookup step resulting in not finding the destination address prefix being a prefix of the destination address, in a default forwarding step and the data packet is forwarded to a default routing destination as

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taught by Nagaraj in order to successfully pair packets with routing table destinations using an address prefix, as implied in sec. 6, lines 50-58 of Nagaraj.

13. Claim 6 is rejected under 35 U.S.C. 103 as being unpatentable over Hariguchi (Pat # 6,181,698) in view of Kumar et al (Pub # 2004/0028040).

In reference to claim 6, Hariguchi teaches a method including the limitation of processing a data packet, having a destination address, towards a routing destination (see spec, sec. 6, as stated above).

Hariguchi explicitly teaches the limitations as disclosed above except for the default-route-prefix being entered together with the default routing destination as an entry into the routing table cache.

The general concept of for the default-route-prefix being entered together with the default routing destination as an entry into the routing table cache is well known within the art as illustrated by Kumar et al, which discloses a limitation of the default-route-prefix being entered together with the default routing destination as an entry into the routing table cache (see e.g. [0042], lines 6-9, which implies this limitation because default routing information (which would consist of an address prefix, as shown in sec. [0040] and is obvious to one of ordinary skill in the art) may be determined for a destination address to be stored in the local cache).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hariguchi et al to include the use of the default-route-prefix being entered together with the default routing destination as an entry into the routing table cache as taught by

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Kumar et al in order to maintain a contact center and effectively track routing information, as implied in sec. [0034], lines 12-15 of Kumar et al.

14. Claims 7-9 are rejected under 35 U.S.C. 103 as being unpatentable over Hariguchi (Pat # 6,181,698) and Kumar et al (Pub # 2004/0028040) and in further view of Bragg (Pub # 2003/0012145).

In reference to claims 7-9, Hariguchi and Kumar teach a method including the limitation of processing a data packet, having a destination address, towards a routing destination (see spec, sec. 6, of Hariguchi as stated above) and the second lookup step on the routing table resulting in finding the destination address prefix being a prefix of the destination address a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache in a cache update step (see e.g. [0027] of Kumar, as stated above).

Hariguchi and Kumar et al teach all the limitations disclosed except for the first lookup step the routing table cache being searched for covering path entries that reside in the routing table cache, the covering path entries in their totality being a prefix for at least all destination address prefixes existing in the routing table, the data packet being forwarded to a default routing destination in a default forwarding step when the first lookup step results in finding no covering path entry for the destination address, and the destination address prefix being a prefix of the destination address is searched in the routing table upon the first lookup step resulting in finding a covering path entry for the destination address in a second lookup step for said destination address.

The general concept of the first lookup step the routing table cache being searched for covering path entries that reside in the routing table cache, the covering path entries in their totality being a prefix for at least all destination address prefixes existing in the routing table, the data packet being forwarded to a default routing destination in a default forwarding step when the first lookup step results in finding no covering path entry for the destination address, and the destination address prefix being a prefix of the destination address is searched in the routing table is well known within the art as illustrated by Bragg, which discloses a limitation of a lookup step the routing table cache being searched for covering path entries that reside in the routing table cache, the covering path entries in their totality being a prefix for at least all destination address prefixes existing in the routing table (see e.g. [0128], lines 3-6, which implies this limitation because address space list is provided for all paths covered within the routing table, see sec. [0040], which that the entries being referred t are routing table entries, also see sec. [0129], which shows that routers use prefix enumeration) and the data packet being forwarded to a default routing destination in a default forwarding step when the first lookup step results in finding no covering path entry for the destination address (see e.g. [0044], lines 1-6, which implies this limitation because alternate paths are aggregated for each destination packet upon failures in an embodied path), and the destination address prefix being a prefix of the destination address is searched in the routing table upon the first lookup step resulting in finding a covering path entry for the destination address in a second lookup step for said destination address (see e.g. [0028], 7-9, which implies this limitation because prefix aggregation is provided for an address of the routing table).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hariguchi and Kumar et al to include the use of the first lookup step the routing table cache being searched for covering path entries that reside in the routing table cache, the covering path entries in their totality being a prefix for at least all destination address prefixes existing in the routing table the data packet being forwarded to a default routing destination in a default forwarding step when the first lookup step results in finding no covering path entry for the destination address, and the destination address prefix being a prefix of the destination address is searched in the routing table upon the first lookup step resulting in finding a covering path entry for the destination address in a second lookup step for said destination address as taught by Bragg in order to successfully provide alternate paths for routing prefixes, as implied in sec. [0131], lines 3-6 of Bragg.

15. Claims 11, 13 and 15 are rejected under 35 U.S.C. 103 as being unpatentable over Nagaraj (Pat # 6,947,415) in view of Kumar et al (Pub # 2004/0028040).

In reference to claim 11, 13, and 15, Nagaraj teaches a method including the limitation of processing a data packet, having a destination address, towards a routing destination (see spec, sec. 5, lines 16-19, which implies this limitation because a packet is processed by a processing unit and sent to its determined destination address), and forwarding the data packet to said default routing destination, when the default-route-prefix matches at least part of said destination address (see spec, sec. 6, lines 50-53, which implies this limitation because each packet is routed based on the address prefix within each routing table that specifies a set of destinations for each packet).

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Nagaraj explicitly teaches the limitations as disclosed above except for a default-route-prefix residing together with a default routing destination as an entry in a routing table cache.

The general concept of a default-route-prefix residing together with a default routing destination as an entry in a routing table cache is well known within the art as illustrated by Kumar et al, which discloses a limitation of a default-route-prefix residing together with a default routing destination as an entry in a routing table cache (see e.g. [0023], lines 1-3, which teaches this limitation because a destination address prefix is implemented for a destination address and may be cached as routing information, as shown in sec. [0027], lines 18-21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nagaraj to include the use of a default-route-prefix residing together with a default routing destination as an entry in a routing table cache as taught by Kumar et al in order to maintain a contact center and effectively track routing information, as implied in sec. [0034], lines 12-15 of Kumar et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Scott whose telephone number is 571-270-1598. The examiner can normally be reached on Mon - Thurs. 7:30-5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

R.A.S.**11 May 2007****FRANTZ JULE**
SUPERVISORY PATENT EXAMINER**FRANTZ JULES**
SUPERVISORY PATENT EXAMINER